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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/591,818	09/06/2006	Goran Schack	9563-21	4711

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EXAMINER	
LE, HOANGANH T	

ART UNIT	PAPER NUMBER
2821	

MAIL DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/591,818	SCHACK ET AL.	
	Examiner	Art Unit	
	HoangAnh T. Le	2821	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *28 January 2009*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *8,12 and 14-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *8,12 and 14-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *1/28/09*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. The RCE filed on January 28, 2009 is acknowledged.

2. The indicated allowability of claims 8,12, and 14-20 is withdrawn in view of the newly discovered reference(s) to Ying et al. Rejections based on the newly cited reference(s) follow.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 8,12, and 14-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ying et al (the US Patent No. 7,339,530) in view of Munson et al (the US Patent No. 6,049,314, of record).

Regarding claim 8, the Ying et al reference teaches in figures 1-5 a portable communication device, comprising: an antenna feeding circuit; a first part 12 having a hollow interior, a main section having a width, length and a first height and including a plurality of electrical elements, and a hinging section 15, wherein the hinging section includes a hollow hinge cavity and has a second height greater than the first height; a second part 14 connected to the first part, wherein the hinging section 15 provides rotation of the first part in relation to the second part around an axis of rotation; and an antenna system comprising: an antenna element 20 located within the first part, wherein

the antenna element is inside the hinging section (figures 2-3); and a ground plane 18 located within and extending along the width and the length of the main section (figures 2-3), wherein a portion of the ground plane extends into the hinging section (figures 2-3), and wherein the ground plane includes a bent section 22 within the hinging section and bent away from a portion of the ground plane in the main section for providing an increased distance between the ground plane and the antenna element in the hinge cavity corresponding to the second height, wherein the ground plane is provided in one piece (figure 3), wherein the plurality of electrical elements of the first part includes radio transmission elements electrically connected to the ground plane, and wherein the antenna element is distanced from the ground plane by at least approximately the first height in a height direction of the first part (figures 2-5). The Ying et el reference does not teach the ground plane and the antenna element are provided from a unitary piece.

The Munson et al reference teaches in figures 1-3 an antenna having unitary radiator/ground plane (see the title and the abstract) in order to have a lower cost, have better reliability, have a higher gain, have an increased bandwidth, and have a lower weight (col. 3, lines 65-66, col. 4, lines 1-3).

Since one of ordinary skill in the art would recognize the benefit of improving the gain and the bandwidth of the antenna, it would have been obvious to provide Ying et al with the antenna element and the ground plane being provided from a unitary piece as taught by Munson et al.

Regarding claim 12, wherein the portable communication device is a cellular phone (figure 1 of Ying).

Regarding claim 14, the Ying et al reference teaches in figures 1-5 an antenna system, for use in a portable communication device, the device having an antenna feeding circuit and a first part 12 with a hollow interior and a main section having a width, length and a first height and including a plurality of electrical elements, the antenna system comprising: a ground plane 18 located within and extending along the width and the length of the main section; and an antenna element 20 located within the first part, wherein the ground plane 18 is provided in one piece, wherein the plurality of electrical elements of the first part includes radio transmission elements electrically connected to the ground plane, wherein the antenna element is distanced from the ground plane by at least approximately the first height in a height direction of the first part, and wherein the ground plane includes a bent section that is bent away from a portion of the ground plane in the main section for providing an increased distance between the ground plane and the antenna element (figure 3). The Ying et al reference does not teach the ground plane and the antenna element are provided from a unitary piece.

The Munson et al reference teaches in figures 1-3 an antenna having unitary radiator/ground plane (see the title and the abstract) in order to have a lower cost, have better reliability, have a higher gain, have an increased bandwidth, and have a lower weight (col. 3, lines 65-66, col. 4, lines 1-3).

Since one of ordinary skill in the art would recognize the benefit of improving the gain and the bandwidth of the antenna, it would have been obvious to provide Ying et al

with the antenna element and the ground plane being provided from a unitary piece as taught by Munson et al.

Regarding claim 15, figures 1 and 2 show a user interface in the first part, wherein the ground plane and the user interface arranged in the first part are provided on the same substrate (figure 2 of Ying et al).

Regarding claim 16, wherein the ground plane is connected to the second part via the hinging section for providing a common ground potential in both parts (figure 2 of Ying et al).

Regarding claim 17, wherein the antenna feeding circuit is in the second part (figure 2 of Ying et al).

Regarding claim 18, wherein the antenna element is a multiband antenna element (figure 4 of Ying et al).

Regarding claim 19, wherein the antenna element is a PIFA antenna element (figure 5 of Ying et al).

Regarding claim 20, wherein the antenna element is a monopole antenna element (figure 2 of Ying et al).

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to HoangAnh T. Le whose telephone number is (571) 272-1823. The examiner can normally be reached on 8:00am-4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Douglas Owens can be reached on (571) 272-1662. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

6. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/HoangAnh T Le/
Primary Examiner, Art Unit 2821